AkzoNobel
Surface Chemistry

909 Mueller Avenue
Chattanooga, TN 37406
USA

T + 1 423 629 1405
F + 1 423 698 8723
www.akzonobel.com/sc

AkzoNobel
Tomorrow's Answers Today

July 30, 2009

TCA 8-17-09 OK.
WMK _____
Amy _____
WEC _____
SAH _____
File: AkzoNobel 2009 (Hamilton)

Dr. Richard Urban
Environmental Office Manager
Tennessee Division of Water Pollution Control
Chattanooga Environmental Field Office
540 McCallie Avenue, Suite 550
Chattanooga, TN 37402

Ref: Renewal of Permit Number: 0002798

Dear Dr. Urban,

Attached are the permit renewal forms for the above mentioned permit.

Please feel free to contact me if I can provide any further information.

Thank you.

Sincerely,

Girish K. Patel

Girish K. Patel, PE, CHMM
Safety & Environmental Supervisor

Encl;

1. Address Attachment for NPDES Permit Application & State Operation Permit Application
2. EPA Form 1,
3. EPA Form 2E
4. EPA Form 2F
5. Attachment 2F-1, Laboratory Report
6. Attachment 2F-2, Site Drainage Map

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DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROLL

ADDRESS ATTACHMENT FOR NPDES PERMIT APPLICATION & STATE OPERATION PERMIT APPLICATION

This must be filled out to complete your permit application.

NPDES/STATE PERMIT NO.: TN0002798

CORPORATE HEADQUARTERS: (Where the permit will go.)

CONTACT PERSON: Girish K. Patel

COMPANY NAME: Akzo Nobel Surface Chemistry LLC

STREET AND/OR P.O. BOX #: 909 Mueller Avenue

CITY: Chattanooga STATE: TN ZIP CODE: 37406

PHONE NO: 423-629-1405 E-MAIL ADDRESS: girish.patel@akzonobel.com

PERMIT BILLING ADDRESS: (Where the invoices will go.)

CONTACT PERSON: Same as above

FACILITY NAME: _____

STREET AND/OR P.O. BOX #: _____

CITY: _____ STATE: _____ ZIP CODE: _____

PHONE NO: _____ E-MAIL ADDRESS: _____

FACILITY LOCATION: (Where the inspectors will go.)

FACILITY NAME: Same as above

STREET ADDRESS: _____

P.O. BOX #: _____ COUNTY: _____

CITY: _____ STATE: _____ ZIP CODE: _____

PHONE NO: _____ E-MAIL ADDRESS: _____

DMR MAILING ADDRESS: (Where the pre-printed Discharge Monitoring Reports will go) (Does not apply to SOP Permits)

CONTACT PERSON: Same as above

FACILITY NAME: _____

STREET AND/OR P.O. BOX #: _____

CITY: _____ STATE: _____ ZIP CODE: _____

PHONE NO: _____ E-MAIL ADDRESS: _____

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERAL INFORMATION
Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F TNDO52003159 (T/A: ; C: D)

LABEL ITEMS	
I.	EPA I.D. NUMBER
III.	FACILITY NAME
V.	FACILITY MAILING ADDRESS
VI.	FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: Akzo Nobel Surface Chemistry LLC

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 Patel, Girish Safety & Environmental Supervisor	(423) 629-1405

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 909 Mueller Avenue

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 Chattanooga	TN	37406

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5

B. COUNTY NAME: Hamilton

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 Chattanooga	TN	37406	

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
2869 *(specify)* Synthetic Resins	2879 *(specify)* Pesticide & Agricultural Chemical n.e.c.

C. THIRD	D. FOURTH
(specify) N/A	*(specify)*

VIII. OPERATOR INFORMATION

A. NAME: Akzo Nobel Surface Chemistry LLC

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P — *(specify)* Private

D. PHONE *(area code & no.)*: A (423) 629-1405

E. STREET OR P.O. BOX: 909 Mueller Avenue

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
Chattanooga	TN	37406	Is the facility located on indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
N 0002798	P NA

B. UIC *(Underground Injection of Fluids)*	E. OTHER *(specify)*
U NA	NA *(specify)*

C. RCRA *(Hazardous Wastes)*	E. OTHER *(specify)*
R NA	NA *(specify)*

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Synthetic resins, agricultural/pesticide manufacturer

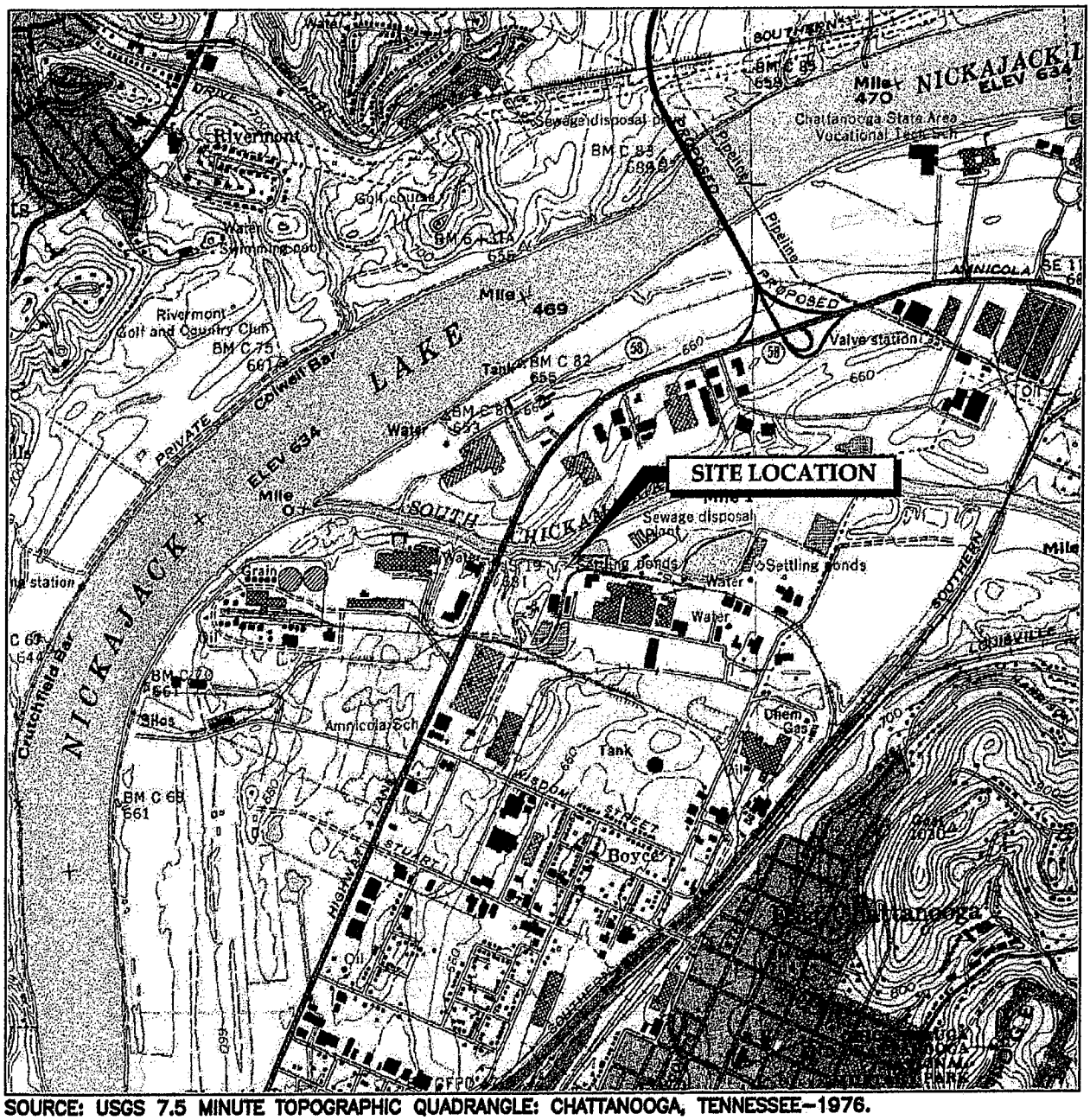
XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
Brent Burke - Site Manager	Brent Burke	7/30/09

COMMENTS FOR OFFICIAL USE ONLY

C



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: CHATTANOOGA, TENNESSEE–1976.

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 1/2 0 1 KILOMETER

TENNESSEE

QUADRANGLE LOCATION

SCALE 1:24000

N

Environmental Resources
ERM Management

SITE LOCATION MAP

ALCO CHEMICALS
CHATTANOOGA, TENNESSEE

ALCO 3-29-04

Please print or type in the unshaded areas only.	EPA ID Number (copy from Item 1 of Form 1) TNDO52003159	Form Approved. OMB No. 2040-0086. Approval expires 5-31-92.

FORM 2E NPDES

EPA Facilities Which Do Not Discharge Process Wastewater

I. RECEIVING WATERS

For this outfall, list the latitude and longitude, and name of the receiving water(s).

Outfall Number *(list)*	Latitude			Longitude			Receiving Water *(name)*
	Deg	Min	Sec	Deg	Min	Sec	
001	35.0(	5.00	7.00	85.0(	15.0(	28.0(	South Chickamauga Creek

II. DISCHARGE DATE *(If a new discharger, the date you expect to begin discharging)*

III. TYPE OF WASTE

A. Check the box(es) indicating the general type(s) of wastes discharged.

☐ Sanitary Wastes ☐ Restaurant or Cafeteria Wastes ☑ Noncontact Cooling Water ☐ Other Nonprocess Wastewater *(Identify)*

B. If any cooling water additives are used, list them here. Briefly describe their composition if this information is available.

No cooling water additives are used.

IV. EFFLUENT CHARACTERISTICS

A. **Existing Sources** — Provide measurements for the parameters listed in the left-hand column below, unless waived by the permitting authority *(see instructions)*.

B. **New Dischargers** — Provide estimates for the parameters listed in the left-hand column below, unless waived by the permitting authority. Instead of the number of measurements taken, provide the source of estimated values *(see instructions)*.

Pollutant or Parameter	(1) Maximum Daily Value *(include units)*		(2) Average Daily Value *(last year)* *(include units)*		(3) Number of Measurements Taken *(last year)*	(or) (4) Source of Estimate *(if new discharger)*
	Mass	Concentration	Mass	Concentration		
Biochemical Oxygen Demand (BOD)	74.3 lbs	<3 mg/1	Not required	to be		NA
Total Suspended Solids (TSS)	148.4 lbs	<6 mg/1	measured on	regular		
Fecal Coliform *(if believed present or if sanitary waste is discharged)*	NA	NA	basis.	Values are		
Total Residual Chlorine *(if chlorine is used)*	NA	NA	one-time	composite		
Oil and Grease	49.5 lbs	2 mg/1	sampling	done for		
*Chemical oxygen demand (COD)	99.0 lbs	4 mg/1	permit	application		
*Total organic carbon (TOC)	94.0 lbs	3.8 mg/1	purposes.			
Ammonia *(as N)*	10.6 lbs	0.43 mg/1				
Discharge Flow	Value 2.97		3.03		52.00	
pH *(give range)*	Value 7.59		7.02 - 7.6		52.00	
Temperature *(Winter)*	10.00 °C		°C		52.00	
Temperature *(Summer)*	30.00 °C		°C			

*If noncontact cooling water is discharged

V. Except for leaks or spills, will the discharge described in this form be intermittent or seasonal? ☐ Yes ☐ No

If yes, briefly describe the frequency of flow and duration.

The flow is constant except for insignificant seasonal variations due to changes in water table.

VI. TREATMENT SYSTEM *(Describe briefly any treatment system(s) used or to be used)*

None

VII. OTHER INFORMATION *(Optional)*

Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other information you feel should be considered in establishing permit limitations. Attach additional sheets, if necessary.

The non-contact cooling water is supplied by three wells on site.

VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title	B. Phone No. *(area code & no.)*
Brent Burke - Site Manager	(423) 629-1405
C. Signature	**D. Date Signed**
Brent Burke	7/30/09

Summary of Incidents

Date	Description
1/30/08	An odor incident resulted from release of residual monomer in the atmosphere from a finished product batch.
12/20/06	Flume discharging treated process water to the POTW overflowed due to high viscosity of the water. The spilled material was contained, collected, treated and disposed appropriately. The water contained a non-hazardous product.
12/6/05	Approximately 100 lbs. of acrylic acid spilled from a leaky valve in the manufacturing production process. The water containing the material was treated in the on-site waster water treatment system prior to discharging the water to POTW under a permit.

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
TND052003159

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM 2F NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
001	35.00	5.00	15.00	85.00	15.00	30.00	South Chickamauga Creek

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
None					

B: You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continue on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*	Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*
001	56000 ft2	56000 ft2			56000 ft2

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

All Akzo Nobel raw material and final products are handled through closed piping and tank systems, and are not susceptible to storm water or precipitation. Tanker truck loading and unloading operations are conducted through closed piping system to prevent precipitation from coming into contact with any final products or raw materials. Raw materials and products stored at Akzo Nobel are not exposed to precipitation. Akzo Nobel does not use significant quantities of pesticides, herbicides, soil conditioners and fertilizers.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
1	Akzo Nobel's storm water management practices include: Secondary containment, berms	

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title *(type or print)*	Signature	Date Signed
Brent Burke - Site Manager	Brent Burke	7/30/09

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

A visual inspection of storm water drainways and outfall was conducted on July 20, 2009. No flow stains were observed. Soil accumulation from ground erosion was noticed in some storm water drainways. Erosion control measures were implemented in Spring 2009.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

See Attachment 1

EPA ID Number *(copy from Item 1 of Form 1)*

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☑ Yes *(list all such pollutants below)* ☐ No *(go to Section IX)*

Color (white, milky)
Phosphorous
Sulfate
Surfite
Surfactants
Iron, Total
Molybdenum
Acrylonitrile
Ethylbenzene (impurity in raw material)
Allylchloride
Carbon Disulfide
Dimethylamine
Ethylene diamine
Methylmethacrylate
Styrene
Vinyl acetate

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ Yes *(list all such pollutants below)* ☐ No *(go to Section IX)*

Ceriodephnia dubia and pimephales prometas evaluation for Akzo Nobel's non-contact cooling water. Akzo Nobel's storm water has been tested for total suspended solids (TSS). BOD, pH, oil and grease, total phospherous, floating solids and flow as required by the existing permit.

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☑ Yes *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☐ No *(go to Section X)*

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Empirical Laboratories, LLC	621 Mainstream Drive, Ste. 270 Nashville, TN 37228	615-345-1115	Aquatic Toxicity Testing
Technical Laboratories, Inc.	515 Cherokee Blvd. Chattanooga, TN 37405	423-265-4533	TSS, BOD, Oil and Greasse, Total phosphorous, Floating solids

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
Brent Burke - Site Manager	(423) 629-1405
C. Signature	D. Date Signed
Brent Burke	7/30/09

EPA ID Number (*copy from Item 1 of Form 1*)

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A	3.5 mg/L		5.00	Note: Akzo Nobel discharges its
Biological Oxygen Demand (BOD5)			28.5 mg/L		3.00	storm water from a retention basin;
Chemical Oxygen Demand (COD)			250.0 mg/L		1.00	therefore, it does not sample
Total Suspended Solids (TSS)			13.7 mg/L		4.00	discharge during the first 20
Total Nitrogen			3.35 mg/L		4.00	minutes
Total Phosphorus			1.6 mg/L		4.00	
pH	Minimum	Maximum	Minimum	Maximum 7.40	4.00	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
						Please see Attachment 2-2F lab
						report for OCPSF listed chemicals.
						This sampling was done for permit
						application purposes only.

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
						Akzo Nobel does not have reason to
						believe that any of the pollutants
						listed in tables 2F-2, 2F-3 and
						2F-4 are present in its discharge
						under the NPDES permit. The
						pollutants listed under Table 2F-2
						have been listed below.
						Nitrogen - Total organic
						Phosphorous - Total
						Sulfate
						Sulfite
						Surfactants
						Iron, total, contributed by the past
						fallout from a neighboring industry.

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
11/15/08	120	2.3	Approximately 120	1123 gallons/minute	56,500 gallons

7. Provide a description of the method of flow measurement or estimate.

Flow meter with 90° V notch wire

Attachment 2F-1

Empirical Laboratories, LLC

621 Mainstream Drive, Suite 270
Nashville, TN 37228
615.345.1115 Phone
615.846.5426 Fax

08 July 2009

James Cawthorne
Cawthorne Engineering Co., Inc. (C535)
530 N. Market Street
Chattanooga, TN 37405

RE: Cawthorne Engineering (Laboratory WorkOrder # 0906116)

Enclosed are the results of analyses for samples received by the laboratory on 06/12/2009 09:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ashley Bester
Project Manager

Laboratory Case Narrative
for Laboratory WorkOrder # 0906116

The samples were received and processed using normal regulatory and laboratory protocols. Unless noted in the Final Report there were no data anomalies or failures noted during data assessment and reporting. The results within this report relate only to the samples received and reported within the report and this report shall not be reproduced except in full, without the approval of Empirical Laboratories, LLC.

Laboratory Analytical Results Report

Client Sample ID: Stormwater Basin Pump Discharge
Sample Collection Date/Time: 06/11/2009 16:30
Lab Sample ID: 0906116-01
Sample Received Date/Time: 06/12/2009 09:00
Sample Matrix: Water

Analyte	Result	MDL	RL	Units	Dilution	Analyzed	Method	Batch	Notes
Classical Chemistry Parameters									
Cyanide	ND	0.00500	0.0100	mg/L	1	06/19/09 14:00	SW9012A	9F18017	U
Metals in Water by ICP-AES									
Lead	**2.62**	1.50	3.00	ug/L	1	06/18/09 17:05	E200.7	9F15003	J
Zinc	**407**	5.00	20.0	ug/L	1	06/18/09 17:05	E200.7	9F15003	
Volatile Organic Compounds by GC/MS									
Benzene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Bromodichloromethane	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Bromoform	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Bromomethane	ND	0.670	2.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Carbon tetrachloride	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Chlorobenzene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Chloroethane	ND	0.670	2.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
2-Chloroethyl vinyl ether	ND	1.67	5.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Chloroform	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Chloromethane	ND	0.670	2.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Dibromochloromethane	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
1,3-Dichlorobenzene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
1,2-Dichlorobenzene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
1,4-Dichlorobenzene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
1,1-Dichloroethane	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
1,2-Dichloroethane	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
trans-1,2-Dichloroethene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
1,2-Dichloropropane	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
cis-1,3-Dichloropropene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
trans-1,3-Dichloropropene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Ethylbenzene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Methylene chloride	ND	0.670	2.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
1,1,2,2-Tetrachloroethane	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Tetrachloroethene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Toluene	**2.03**	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	
1,1,2-Trichloroethane	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
1,1,1-Trichloroethane	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Trichloroethene	ND	0.330	1.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Trichlorofluoromethane	ND	0.670	2.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Vinyl chloride	ND	0.670	2.00	ug/L	1	06/24/09 20:59	E624	9F25009	U
Surrogate: Bromofluorobenzene			*96.1 %*	*80-120*		*06/24/09 20:59*	*E624*	*9F25009*	
Surrogate: Dibromofluoromethane			*110 %*	*85-120*		*06/24/09 20:59*	*E624*	*9F25009*	
Surrogate: 1,2-Dichloroethane-d4			*108 %*	*85-130*		*06/24/09 20:59*	*E624*	*9F25009*	
Surrogate: Toluene-d8			*107 %*	*85-115*		*06/24/09 20:59*	*E624*	*9F25009*	

Laboratory Analytical Results Report

Client Sample ID: Stormwater Basin Pump Discharge
Sample Collection Date/Time: 06/11/2009 16:30
Lab Sample ID: 0906116-01
Sample Received Date/Time: 06/12/2009 09:00
Sample Matrix: Water

Analyte	Result	MDL	RL	Units	Dilution	Analyzed	Method	Batch	Notes
Semivolatile Organic Compounds by GC/MS									
3,3'-Dichlorobenzidine	ND	4.62	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Acenaphthene	ND	3.87	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Acenaphthylene	ND	5.75	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Anthracene	ND	3.02	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Benzidine	ND	3.11	472	ug/L	10	06/19/09 18:56	E625	9F15014	U
Benzo (a) anthracene	ND	3.77	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Benzo (a) pyrene	ND	2.45	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Benzo (b) fluoranthene	ND	4.72	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Benzo (g,h,i) perylene	ND	5.00	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Benzo (k) fluoranthene	ND	4.62	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
4-Bromophenyl phenyl ether	ND	2.92	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Butyl benzyl phthalate	ND	3.40	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
4-Chloro-3-methylphenol	ND	3.87	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Bis(2-chloroethoxy)methane	ND	2.64	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Bis(2-chloroethyl)ether	ND	6.13	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Bis(2-chloroisopropyl)ether	ND	4.43	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
2-Chloronaphthalene	ND	3.58	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
2-Chlorophenol	ND	3.68	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
4-Chlorophenyl phenyl ether	ND	5.19	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Chrysene	ND	3.58	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Dibenz (a,h) anthracene	ND	7.17	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Di-n-butyl phthalate	ND	7.26	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
1,4-Dichlorobenzene	ND	2.92	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
1,3-Dichlorobenzene	ND	3.58	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
1,2-Dichlorobenzene	ND	2.83	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
2,4-Dichlorophenol	ND	1.70	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Diethyl phthalate	ND	5.09	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
2,4-Dimethylphenol	ND	2.64	189	ug/L	10	06/19/09 18:56	E625	9F15014	U
Dimethylphthalate	ND	4.81	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
4,6-Dinitro-2-methylphenol	ND	21.8	189	ug/L	10	06/19/09 18:56	E625	9F15014	U
2,4-Dinitrophenol	ND	26.5	472	ug/L	10	06/19/09 18:56	E625	9F15014	U
2,4-Dinitrotoluene	ND	4.06	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
2,6-Dinitrotoluene	ND	3.87	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Di-n-octyl phthalate	ND	3.77	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Bis(2-ethylhexyl)phthalate	ND	21.4	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Fluoranthene	ND	2.83	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Fluorene	ND	4.62	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Hexachlorobenzene	ND	3.68	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Hexachlorobutadiene	ND	3.96	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Hexachlorocyclopentadiene	ND	1.70	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Hexachloroethane	ND	3.68	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Indeno (1,2,3-cd) pyrene	ND	10.8	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Isophorone	ND	4.25	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U

Laboratory Analytical Results Report

Client Sample ID: Stormwater Basin Pump Discharge
Sample Collection Date/Time: 06/11/2009 16:30
Lab Sample ID: 0906116-01
Sample Received Date/Time: 06/12/2009 09:00
Sample Matrix: Water

Analyte	Result	MDL	RL	Units	Dilution	Analyzed	Method	Batch	Notes
Semivolatile Organic Compounds by GC/MS									
Naphthalene	ND	1.60	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Nitrobenzene	ND	3.68	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
4-Nitrophenol	ND	4.25	189	ug/L	10	06/19/09 18:56	E625	9F15014	U
2-Nitrophenol	ND	2.45	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
N-Nitrosodimethylamine	ND	3.40	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
N-Nitrosodiphenylamine	ND	2.74	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
N-Nitrosodi-n-propylamine	ND	3.68	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Pentachlorophenol	ND	13.0	189	ug/L	10	06/19/09 18:56	E625	9F15014	U
Phenanthrene	ND	3.49	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Phenol	ND	2.83	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Pyrene	ND	3.58	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
1,2,4-Trichlorobenzene	ND	13.3	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
2,4,6-Trichlorophenol	ND	4.25	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
n-Decane	ND	47.2	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
n-Octadecane	ND	47.2	47.2	ug/L	10	06/19/09 18:56	E625	9F15014	U
Surrogate: 2-Fluorobiphenyl			*42.4 %*	*35-110*		*06/19/09 18:56*	*E625*	*9F15014*	
Surrogate: 2-Fluorophenol			*14.7 %*	*30-110*		*06/19/09 18:56*	*E625*	*9F15014*	
Surrogate: Nitrobenzene-d5			*41.1 %*	*30-110*		*06/19/09 18:56*	*E625*	*9F15014*	
Surrogate: Phenol-d6			*10.9 %*	*15-110*		*06/19/09 18:56*	*E625*	*9F15014*	
Surrogate: Terphenyl-dl4			*42.3 %*	*55-125*		*06/19/09 18:56*	*E625*	*9F15014*	
Surrogate: 2,4,6-Tribromophenol			*85.0 %*	*45-125*		*06/19/09 18:56*	*E625*	*9F15014*	

Notes and Definitions

U	Analyte included in the analysis, but not detected
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
Aa	Reflects that only a portion of sample was used for the matrix spike.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
RL	Reporting Limit

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

5990

Send Results to:	Send Invoice to:
Name JAMES CAWTHORNE	Name
Company CAWTHORNE ENG.	Company
Address 530 N. MARKET ST	Address
City CHATTANOOGA	City SAME
State, Zip TN 37405	State, Zip
Phone (423) 267-2222	Phone
Fax (423) 267-2213	Fax
E-mail	E-mail

Project No./Name: AKZO NOBEL - STORMWATER

Sampler's (Signature): James L. Cawthorne

Analysis Requirements: NCS-OCPSF SEMI-VOLATILES; NCS-OCPSF-LEAD & ZINC; NCS-OCPSF-IRON; NCS-OCPSF-CYANIDE

Lab Use Only:

VOA Headspace	Y	(N)	NA
Field Filtered	Y	(N)	NA
Correct Containers	(Y)	N	NA
Discrepancies	Y	(N)	NA
Cust. Seals Intact	(Y)	N	NA
Containers Intact	(Y)	N	NA

Airbill #: 3022

CAR #: —

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	Comments	No. of Bottles	Lab Use Only Containers/Pres.
0906116-01	6-11-09 4:30 PM	STORMWATER BASIN PUMP DISCHARGE	WATER	GRAB	2	2 1*
	6-11-09 4:30 PM	STORMWATER BASIN PUMP DISCHARGE	WATER	GRAB	1	1C-Ni
	6-11-09 4:30 PM	STORMWATER BASIN PUMP DISCHARGE	WATER	GRAB	3	3J-Hg
-01*	6-11-09 4:30 PM	STORMWATER BASIN PUMP DISCHARGE	WATER	GRAB	1	1B-Sh
WS 6/12/09						

	Date/Time	Received By: (Signature)
Sample Kit Prep'd by: (Signature)		
Relinquished by: (Signature) James L. Cawthorne	6-11-09 6:15	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	6/12/09	Temperature 0.4°C

REMARKS: SHIPPED OVERNIGHT BY FEDEX

WS 6/12/09

*-See COF WS 6/12/09

Details:

Page 1 of 1

Cooler No. 1 of 1

Date Shipped 6-11-09

Shipped By JSC

Turnaround NORMAL

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

09:00

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 0906116 Number of Coolers: 1 of 1

Client: Cawthorne Eng. Project: AK20 Natel SW

Date/Time Received: **06/12/09 09:00** Date cooler(s) opened: **06/12/09**

Opened By (print): **WILLIAM SCHWAB** (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive?: FedEx UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 3022

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 1 Seal date: 6/11/09 Seal Initials: JC

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE Temperature of Samples upon Receipt: 0.9°C

Dates samples were logged-in: **06/12/09**

9. Initial this form to acknowledge login of sample(s): (Name): **WILLIAM SCHWAB** (Initial): WS

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

If Non-Conformance issues were present, list by sample ID: _____

~~* Trip Blank rec'd + not on COC~~ CAR#: _____

~~Added to WO~~

amended WS 6/12/09